

S/N 09/844,965
Amendment dated February 24, 2006
Reply to Office Action of December 2, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A system for washing, disinfecting, or sterilizing a medical or dental instrument or device~~an object~~, the system comprising:
 - at least a first station adapted and configured to house the object;
 - holder at the ~~first~~ station, the holder being adapted and configured for supporting the object;
 - sonicator comprising ultrasonic irrigated probe at the first station and adjacent position taken by the object in the holder and adapted and configured to impact the object in the first station with ultrasonic energy and to provide ultrasonic energy from a point at the first station;
 - the irrigated probe is movable for manual sonic cleaning of dirty objects;
 - liquid transporter adapted and configured to circulate at the ~~first~~ station and spray around and against the object wash composition, antimicrobial composition comprising peroxycarboxylic acid at 20 to 25 degrees C and a pH of 5 to 7, rinse composition, or to circulate and spray a plurality of these compositions; ~~and~~
 - emitter adapted and configured to impact the object with light or microwave energy either during or after circulating the antimicrobial composition;
 - sterilant system comprising:
 - an injector configured to add sterilant comprising chlorine dioxide; the injector comprising pressure release valve configured to release at the station gaseous sterilant from pressurized vessel; and vent adapted and configured to evacuate sterilant gas from the station; and
 - dryer adapted and configured to dry the object;
 - wherein the medical or dental instrument or device comprises diagnostic instruments, trays, pans, holders, racks, forceps, scissors, shears, saws (e.g. bone saws and their blades), hcmostats, knives, chisels, rongeurs, files, nippers, drills, drill bits, rasps, burs, spreaders, breakers, elevators, clamps, needle holders, carriers, clips, hooks, gouges, curettes, retractors,

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straightener, punches, extractors, scoops, keratomes, spatulas, expressors, trocars, dilators, cages, glassware, tubing, catheters, cannulas, plugs, stents, endoscopes (e.g., noninvasive flexible and rigid fiber optic endoscopes), endotracheal tubes, anesthesia breathing circuits, cytosopes, arthoscopes and related equipment, and the like, or combinations thereof.

2-4. (Canceled)

5. (Original) The system of claim 1, wherein the sonicator is adapted and configured to provide ultrasonic energy throughout fluid at the first station.

6. (Original) The system of claim 5, further comprising second sonicator adapted and configured to provide ultrasonic energy from probe outside the first station.

7. (Canceled)

8. (Original) The system of claim 6, further comprising holder adapted and configured to support the object adjacent the second sonicator probe.

9. (Original) The system of claim 1, wherein the sonicator is adapted and configured to dislodge soil from the object and the liquid transporter is adapted and configured to remove the soil.

10. (Previously presented) The system of claim 1, wherein the liquid transporter comprises pump and valve adapted and configured to circulate fluid at the first station and around and against the object, to add fluid to the first station, and to remove fluid from the first station.

11. (Previously presented) The system of claim 1, wherein the first station, the sonicator, and the liquid transporter are adapted and configured to apply to the object the wash composition and ultrasonic energy.

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12. (Original) The system of claim 11, wherein the sonicator is adapted and configured to provide ultrasonic energy from point within the first station.

13. (Canceled)

14. (Original) The system of claim 11, wherein the sonicator applies ultrasonic energy throughout the wash composition.

15-17. (Canceled)

18. (Original) The system of claim 1, wherein the liquid transporter comprises sprayer adapted and configured to apply to the object the antimicrobial composition, the rinse composition, or a plurality of these compositions.

19. (Original) The system of claim 18, wherein the first station comprises spray chamber.

20. (Original) The system of claim 1, wherein the liquid transporter is adapted and configured to sequentially circulate the wash composition, the antimicrobial composition, and the rinse composition.

21. (Original) The system of claim 1, wherein the liquid transporter is adapted and configured to circulate the wash composition, the antimicrobial composition, first rinse composition, second rinse composition, or to circulate a plurality of these compositions.

22. (Original) The system of claim 21, wherein the liquid transporter is adapted and configured to sequentially circulate, in this order, the wash composition, the first rinse composition, the antimicrobial composition, and the second rinse composition.

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23. (Original) The system of claim 1, further comprising dispenser adapted and configured to add wash concentrate, antimicrobial concentrate, rinse concentrate, or to add a plurality of these concentrates.

24. (Original) The system of claim 1, wherein the dryer is adapted and configured to dry the object at the first station.

25. (Original) The system of claim 1, wherein the dryer comprises blower adapted and configured to circulate heated gas at the first station.

26-28. (Canceled)

29. (Original) The system of claim 1, further comprising conveyor adapted and configured to transport the object through the system.

30. (Canceled)

31. (Currently amended) The system of claim 1, further comprising second station, wherein:

the first station comprises the sonicator and is adapted and configured to circulate at the first station and spray around and against the object the wash composition, the antimicrobial composition, the rinse composition, or a plurality of these compositions; and

the second station comprising holder, sonicator, liquid transmitter, sterilant system, emitter, dryer, or a combination thereof and is adapted and configured to circulate at the second station and spray around and against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions; ~~the second station comprises the dryer;~~ or a combination thereof.

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32. (Original) The system of claim 31, wherein the liquid transport system comprises sprayer at the second station and adapted and configured to apply to the object the antimicrobial composition, the rinse composition, or a plurality of these compositions.

33. (Original) The system of claim 32, wherein the second station comprises spray chamber.

34-35. (Canceled)

36. (Previously presented) The system of claim 31, wherein the second station is adapted and configured to circulate around and spray against the object the rinse composition.

37. (Previously presented) The system of claim 36, wherein the first station is adapted and configured to circulate around and spray against the object the wash composition, the antimicrobial composition, and first rinse composition; and the second station is adapted and configured to circulate around and spray against the object second rinse composition.

38. (Previously presented) The system of claim 31, wherein the second station is adapted and configured to circulate around and spray against the object the antimicrobial composition and the rinse composition.

39. (Previously presented) The system of claim 38, wherein the first station is adapted and configured to circulate around and spray against the object the wash composition and first rinse composition; and the second station is adapted and configured to circulate around and spray against the object the antimicrobial composition and second rinse composition.

40. (Original) The system of claim 31, wherein the second station comprises the dryer.

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41. (Original) The system of claim 31, further comprising injector adapted and configured to add sterilant at the second station.

42. (Currently amended) The system of claim 31, further comprising third station, wherein:

the first station comprises the sonicator and is adapted and configured to circulate at the first station and spray around and against the object the wash composition, the antimicrobial composition, or a plurality of these compositions;

the second station is adapted and configured to circulate at the second station and spray around and against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions; and

the third station comprising holder, sonicator, liquid transmitter, sterilant system, emitter, dryer, or a combination thereof and being adapted and configured to circulate at the third station and spray around and against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions; ~~the third station comprises the dryer, or a combination thereof.~~

43. (Original) The system of claim 42, wherein the third station comprises the dryer.

44. (Original) The system of claim 43, further comprising injector adapted and configured to add sterilant at the third station.

45. (Previously presented) The system of claim 42, wherein the third station is adapted and configured to circulate around and spray against the object the rinse composition.

46. (Original) The system of claim 45, wherein the liquid transport system comprises sprayer at the third station and adapted and configured to apply the rinse composition to the object.

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47. (Original) The system of claim 46, wherein the third station comprises spray chamber.

48-49. (Canceled)

50-54. (Canceled)

55. (Currently amended) The system of claim 42, further comprising fourth station, wherein:

the first station comprises the sonicator and is adapted and configured to circulate at the first station and around and spray against the object the wash composition, the antimicrobial composition, or a plurality of these compositions;

the second station is adapted and configured to circulate at the second station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the third station is adapted and configured to circulate at the third station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions; and

the fourth station comprising holder, sonicator, liquid transmitter, sterilant system, emitter, dryer, or a combination thereof and being adapted and configured to circulate at the second station and spray around and against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions; ~~the fourth station comprises the dryer, or a combination thereof.~~

56. (Original) The system of claim 55, wherein the fourth station comprises the dryer.

57. (Canceled)

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58. (Previously presented) The system of claim 55, wherein the fourth station is adapted and configured to circulate around and spray against the object the rinse composition.

59. (Original) The system of claim 58, wherein the liquid transport system comprises sprayer in the fourth station and adapted and configured to apply the rinse composition to the object.

60. (Original) The system of claim 59, wherein the fourth station comprises spray chamber.

61-66. (Canceled)

67. (Currently amended) The system of claim 55, further comprising fifth station, wherein:

the first station comprises the sonicator and is adapted and configured to circulate at the first station and around and spray against the object the wash composition, the antimicrobial composition, or a plurality of these compositions;

the second station is adapted and configured to circulate at the second station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the third station is adapted and configured to circulate at the third station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the fourth station is adapted and configured to circulate at the fourth station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the fifth station comprising holder, sonicator, liquid transmitter, sterilant system, emitter, dryer, or a combination thereof and being adapted and configured to circulate at the second station and spray around and against the object the antimicrobial composition, the rinse

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composition, or a plurality of these compositions; ~~the fifth station comprises the dryer;~~ or a combination thereof.

68. (Original) The system of claim 67, wherein the fifth station comprises the dryer.

69. (Canceled)

70. (Previously presented) The system of claim 67, wherein the fifth station is adapted and configured to circulate around and spray against the object the rinse composition.

71. (Original) The system of claim 70, wherein the liquid transport system comprises sprayer in the fifth station and adapted and configured to apply the rinse composition to the object.

72. (Original) The system of claim 71, wherein the fifth station comprises spray chamber.

73-74. (Canceled)

75. (Original) The system of claim 67, wherein:
the first station comprises the sonicator and is adapted and configured to circulate the wash composition;
the second station is adapted and configured to circulate first rinse composition;
the third station is adapted and configured to circulate the antimicrobial composition; and
the fourth station is adapted and configured to circulate second rinse composition.

76. (Currently amended) The system of claim 67, further comprising sixth station, wherein:

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the first station comprises the sonicator and is adapted and configured to circulate at the first station and around and spray against the object the wash composition, the antimicrobial composition, or a plurality of these compositions;

the second station is adapted and configured to circulate at the second station and around and against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the third station is adapted and configured to circulate at the third station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the fourth station is adapted and configured to circulate at the fourth station and around and spray against the object the antimicrobial composition, the rinse composition, or a plurality of these compositions;

the fifth station is adapted and configured to circulate at the fifth station and around and spray against the object the rinse composition, the fifth station comprises the dryer, the fifth station comprises the apparatus to add gaseous sterilant, or a combination thereof; and

the sixth station comprising holder, sonicator, liquid transmitter, sterilant system, emitter, dryer, or a combination thereof~~the sixth station comprises the dryer, the sixth station comprises the apparatus to add gaseous sterilant, or a combination thereof.~~

77-118. (Canceled)